

REFERENCE LIST OF LABORATORY TESTS
CABINET FOR HEALTH SERVICES
DEPARTMENT FOR PUBLIC HEALTH
DIVISION OF LABORATORY SERVICES
Telephone: 502/564-4446

The following is an alphabetical list of agents or conditions for which testing is available for county health departments. The specimen required for each condition, applicable mailing containers and submission forms are listed.

DISEASE/ CONDITION	TEST	SPECIMEN	LAB FORM	CONTAINER
ABO Grouping	See Prenatal Profile			
ADENOVIRUS	Isolation	Throat wash, throat swab, eye swab, rectal swab.	#275	Virus isolation swab collection kit.
AIDS		See HIV-I		
AMEBIASIS	Formalin-Hemo D concentrations. Microscopic exam. Trichrome stained slides.	Feces. At least three specimens collected on alternate days.	#219	Intestinal parasites, Two vials – PVA & 10% formalin.
ANTHRAX NOTE: Call the Division of Epidemiology or the Division of Laboratory Services for specific instructions before collecting any specimen.	Isolation Identification (referred culture)	Agar slant: Trypticase soy, blood or chocolate slants	#219	Mailing container furnished by submitter.
ASEPTIC MENINGITIS	Isolation	Feces/rectal swab, throat wash/swab, spinal fluid, autopsy tissue.	#275	Virus isolation swab-collection kit.
BACILLUS ANTHRACIS		See Anthrax		

<u>BACILLUS CEREUS</u>	Isolation	Feces, urine, rectal swabs, vomitus. NOTE: By request of Epidemiology ONLY in foodborne disease outbreaks. Mark slip " <u>Bacillus cereus</u> "	#219	Enteric Pathogens complete kit with Cary-Blair preservative. Must be refrigerated.
		Food	#504	Refer to the Manual for Environmentalist & Milk Inspectors
	Identification (referred culture)	Agar slant: heart infusion, trypticase soy, blood or chocolate agar slant.	#219	Mailing container furnished by submitter.
<u>BALANTI-DIASIS, BALANTIDIUM COLI</u>	Formalin-Hemo D concentrations & microscopic examination.	Feces. At least three specimens collected on alternate days.	#219	Intestinal parasites, two vials – PVA & 10% formalin.
	Microscopic exam of stained films.	See above.	#219	See above.
<u>BORELLIA BURGDOFFER</u>		See Lyme's Disease		
<u>BORDETELLA PERTUSSIS</u> (WHOOPIG COUGH)	Isolation	Call Laboratory Services for specific instructions.		
	Identification (referred culture)	Bordet-Gengou plate or Jones-Kendrick medium slant.	#219	Mailing container furnished by submitter.
	Direct FA (agent detection)	Nasopharyngeal smears on 2 slides.	#275	Pertussis FA slide kit.

<u>BOTULISM, CLOSTRIDIUM BOTULINUM</u>	Patient's physician must consult the Division of Epidemiology to verify the need to perform appropriate tests.	Consult with Laboratory Services for specific information on collecting and submitting specimens.		
BRUCELLA BRUCELLOSIS	Isolation Identification (referred culture)	NOT AVAILABLE Trypticase soy agar slant.	#219	Mailing container furnished by submitter.
BUBONIC PLAGUE		See Yersinia Pestis		
BURKHOLDRIA MALLEI		See Glander's		
CAMPYLO- BACTER	Isolation Identification (referred culture)	Feces, rectal swabs, swabs dipped in feces. Swab from culture in Cary Blair, Campy thio or campy blood plate in bag with Campy gas or in semi-solid motility type medium.	#219 #219	Complete enteric pathogens kit with Cary-Blair. MUST be sent refrigerated. DO NOT FREEZE. Mark slip " <u>Campylobacter</u> " Mailing container furnished by submitter.
CANDIDIASIS	Serology	Serum or 5 ml clotted blood.	#213	Serology container.
CHICKENPOX (VARICELLA- ZOSTER)	Isolation	Vesical fluid/swab.	#275	Virus isolation swab-collection kit.
	Serology : EIA	Single serum (for immune status. Acute and convalescent sera (for diagnosis)	#275	Viral and rickettsial serology kit.

CHLAMYDIA TRACHO- MATIS	Nucleic Acid Probe	Urogenital & eye.	#194	PACE 2 specimen collection kit Female & Male. NOTE: Submit ASAP; must be received in the lab within 7 days of collection. Available only through local health department prenatal, family planning clinics, and STD clinics.
CHOLERA		See Vibrio Cholera		
CHOLESTER- OL SCREEN		Serum or whole blood in 7 ml red-stoppered tube.	#230	
CLOSTRIDIUM BOTULINUM		See Botulism		
CONGENITAL HYPO- THYROIDISM	FIA	Dried blood spots.	#228	Newborn screening form.
COXSACKIE VIRUS		See Enterovirus		
CRYPTOCOC- COSIS	Serology	Sera, 5-8 ml clotted blood, or 1-2 ml spinal fluid.	#213	Serology container.
CRYPTO- SPORIDIUM	Microscopic exam of stained slides.	Feces, at least three specimens collected on alternate days.	#219	Intestinal parasites, single vial (10% formalin). Request cryptosporium exam.
CYTOMEGA- LOVIRUS (CMV)	Isolation	Fresh urine, deliver to Lab without delay, keep cold but do not freeze.	#275	Mailing container furnished by sender.
	Serology : EIA	Acute and convalescent sera.	#275	Viral & rickettsial serology kit.

DIARRHEA	Bacterial culture	SEE Salmonella, Shigella, Campylobacter, Vibrio, Escherichia coli 0157:H7, Yersinia, Amebiasis, and Cryptosporidium		
	Viral Isolation	Feces/rectal swab.	#275	Virus isolation swab collection kit.
DIPHTHERIA	Isolation	NOT AVAILABLE		
	Identification (referred culture)	Prefer Loeffler's or Pai slant. May use trypticase soy or heart infusion agar slant.	#219	Mailing container furnished by submitter.
DYSENTERY (AMEBIC)		See Amebiasis.		
ECHO VIRUS		See Enterovirus.		
ENCEPHALITIS VIRAL	Isolation (other than ARBO)	Spinal fluid, feces/rectal swab, throat wash/swab, autopsy tissue.	#275	Virus isolation swab collection kit.
Encephalitis ARBO Viral St. Louis Eastern Equine Western Equine California Grp West Nile Virus	Serology : EIA	Acute and convalescent sera.	#275	Viral & rickettsial serology kit.
ENTERO-BIASIS (PINWORMS)	Direct Examination	Follow kit instructions. Submit specimens on three consecutive days.	#219	Pinworm tube outfit.
ENTEROVIRUS (Coxsackie, ECHO, Reovirus, Polio)	Isolation	Feces/rectal swab, spinal fluid, throat wash/swab, autopsy tissue.	#275	Virus isolation swab collection kit.

<u>ESCHERICHIA COLI</u> 0157:H7	Isolation	Feces Rectal Swabs	#219	Enteric pathogens kit with buffered glycerol saline.
		Rectal Swabs	#219	Special kit with Cary-Blair preservative and cold packs. Must be refrigerated. DO NOT FREEZE. Mark slip "Escherichia coli 0157:H7".
	Identification	10 picks from MacConkey sent on separate agar slants without sugar, or 5 picks of colorless colonies from MacConkey D-Sorbitol agar sent on separate heart infusion agar slants.	#219	Mailing container furnished by submitter.
FEBRILE AGGLUTININS	Serology	Serum	#203	Call Serology Section for instructions.
FLUORESCENT TREPONEMA ANTIBODY (FTA)	For diagnostic problem cases only.	See Syphilis		
FRANCISELLA TULARENSIS		See Tularemia		
FOODS: CHEMICAL ANALYSIS	Possible contamination, adulteration, mislabeling, preservatives, & decomposition of foods.	Packaged food.	#504	Available only through county environmentalists.
FOOD AND WATERBORNE DISEASES	Bacteriological exam of milk/ Dairy products. Water bacteriology. Foodborne disease investigations.			Refer to Manual for Environmentalists & Milk Inspectors for all tests.

GALACTO-SEMIA	Beutler	Heel puncture blood on filter paper.	#228	Newborn screening test kit.
GIARDIASIS	Formalin-Hemo-D concentration and microscopic exam of trichrome stained slides.	Feces. At least three specimens collected on alternate days.	#219	Intestinal parasites two vial container (PVA & 10% formalin)
GLANDERS DISEASE	Identification	TSA, blood, or chocolate agar slant.	#219	Mailing container furnished by submitter.
GLUCOSE	1 hour post 50 gram load.	Plasma, 7ml whole blood in gray stoppered tube.	#230	
GLUCOSE FASTING	1 hour post 50 gram load.	Plasma, 7ml whole blood in gray stoppered tube.	#230	
GLUCOSE TOLERANCE	Done only for Pre & Post Natal Patients.	7 ml whole blood in gray-stoppered tube.	#230	
GONORRHOEA	Nucleic acid probe.	Urogenital swab.	#194	PACE 2 specimen collection kit.
	Smear for gram stain.	MALE: Anogenital sources ONLY. FEMALE: Direct smear not available.	#219	Gonorrhea slide kit.
<u>NEISSERIA GONORRHOEA</u>	Nucleic Acid Probe (Note: Submit probe test ASAP; must be received in lab within 7 days of collection. Available only through local health department, prenatal, family planning, clinics and STD clinics.	Endocervical or urogenital swab.	#194	PACE 2 specimen collection kits.

NEISSERIA GONORRHOEA & OTHER NEISSERIA SPECIES	Isolation	Not available.		
	Identification (referred culture) NOTE: All N. gonorrhoeae isolates are tested for beta- lactamase, penicillin, & tetracycline susceptibility. N. meningitidis isolates are grouped.	Suspected <u>N. gonorrhoeae</u> , <u>N. lactamica</u> or <u>N. meningitidis</u> use Martin Lewis or chocolate plate in bag with CO2 pill. Other species, use chocolate agar plate or slant. Specimen must be received within 72 hours of initial culturing or subculturing. Incubate subcultures 24 hours before shipping.	#219	GC culture container.
HAEMOPHILUS INFLUENZA	Grouping	Pure culture on chocolate agar.	#219	Mailing container furnished by submitter.
HEMOLYTIC DISEASE OF THE NEWBORN		(See Rh Factor)		
HEPATITIS	HbsAg Anti-HBs Anti-HBc	Serum, NOTE: Available only through local health department prenatal clinics.	#213	Hepatitis Serology kit.
	Anti-HAV	Serum, NOTE: Available through Epidemiology	#213	Hepatitis Serology kit.

HERPES SIMPLEX	Isolation	Vesicle Fluid, spinal fluid, throat wash swab, lesion swab.	#275	Virus isolation swab collection kit.
	Antigen detection: DFA	Skin lesion smears in saline on slide.	#275	Herpes FA slide kit.
	Serology : EIA	Acute and convalescent sera.	#275	Viral & rickettsial serology kit.
HERPES ZOSTER		See Chickenpox		
HIV-I	EIA, Western Blot NOTE: Available only through counseling & testing sites or sexually transmitted disease clinics. Forms and numbered stickers available <u>ONLY</u> from S.T.D.	Serum	#197	
HYPOTHYROID		See Congenital Hypothyroidism		
INFLUENZA	Isolation	Nasopharyngeal swab/Throat swab/wash.	#275	Virus isolation swab collection kit.
	Serology :	Acute and convalescent sera.	#275	Viral & rickettsial serology kit.
INTESTINAL HELMINTHS	Formalin- Hemo-D concentration & microscopic examination.	Feces or passed worm. For feces, submit at least three specimens on alternate days.	#219	Intestinal parasites, single vial container (10% formalin)

INTESTINAL PARASITES		See Intestinal Helminths and Intestinal Protozoa.		
INTESTINAL PROTOZOA	Formalin-Hemo-D concentration 7 microscopic examination. Trichrome Smears.	Feces. Submit at least three specimens on alternate days.	#219	Intestinal parasites, two vial container (PVA & 10% formalin).
INTRAUTERINE INFECTIONS (TORCH AGENTS)	Serology	About 2 ml serum each from child and mother.	#275	Viral & rickettsial serology kit.
LEAD	For information on blood lead screening, call the Louisville-Jefferson County Health Department at 502/574-6530.			
LEGION-NAIRES' DISEASE	DFA (agent detection)	Urine	#275	Mailing container furnished by submitter.
LEPTOSPIROSIS	Agglutination	Acute and convalescent sera.	#213	Serology container.
LIPID PROFILE		Serum or whole blood in 7 ml red-stoppered tube.	#230	
LISTERIA MONO-CYTOGENES	DNA Probe	TSA, or blood agar slant.	#219	Mailing container furnished by submitter.
LITHIUM LEVEL	Provided ONLY for Comprehensive care patients with doctor's order.	Serum	#224	

LYME DISEASE	Serology	Prior consultation with the Division of Epidemiology.	#275	Viral & rickettsial serology kit.
LYME'S DISEASE	PCR (CDC)	Tick	#219	Mailing container furnished by submitter.
MALARIA	Microscopic exam	Thick & thin blood smears.	#219	Slide and slide mailers are provided by sender.
MEASLES		See Rubeola		
MILK & DAIRY PRODUCTS	Refer to Manual for Environmentalists and Milk Inspectors.			
MISCELLANEOUS BACTERIOLOGY	Identification (referred culture)	Tubed media on which the organism grows best.	#219	Mailing container furnished by submitter. Service provided only for problem organisms.
MUMPS	Serology : EIA	Single serum (for immune status) Acute and convalescent sera (for diagnosis)	#275	Viral & Rickettsial serology kit.
MYCOBACTERIA		See Tuberculosis		
MYOCARDITIS		See Enterovirus – Coxsackie		
NEWBORN SCREENING		See individual tests: PKU, Sick Cell, Congenital Hypothyroid, Galactosemia.		
OPHTHALMIA NEONATORUM	Microscopic exam.	Smear of exudate.	#219	Gonorrhea slide kit.
PERICARDITIS		See Enterovirus-Coxsackie		
PERTUSSIS		See BORDETELLA PERTUSSIS		

PHENYL-KETONURIA (PKU)	EIA	Heel puncture blood on filter paper.	#228	Newborn screening kit.
PINWORMS		See Enterobiasis		
POLIOMYELITIS		See Enterovirus		
PRENATAL PROFILE	Rh/Ab VDRL HbsAg Rubella ABO Typing	Two full 7 ml clot tubes.	#212	Prenatal profile kit available through prenatal clinics or local health department.
RABIES IN ANIMALS	Microscopic exams: Isolation if human exposure case.	Animal Head (refrigerated)	#254	Rabies shipping container.
REOVIRUS		See Enterovirus		
RESPIRATORY SYNCYTIAL VIRUS	Isolation	Throat wash/ Swab (Do not freeze, but keep cold.) NOTE: Rush, virus not stable.	#275	Virus isolation swab collection kit.
Rh FACTOR (HEMOLYTIC DISEASE OF THE NEWBORN ONLY)	Rh determination (D and DU factors) Atypical antibody screen and identification.	8-10 ml whole blood. 8-10 ml whole blood	#213	Serology container. NOTE: Available only through local health department prenatal clinics.
RHEUMATIC FEVER		See Streptococcal Infection		
ROCKY MOUNTAIN SPOTTED FEVER	Serology	Acute and convalescent sera.	#275	Viral & rickettsial serology kit.

RUBELLA (German Measles)	Serology: EIA: IgG	Single serum (for immune status)	#275	NOTE: Prior approval from the Division of Epidemiology.
	EIA: IgM	Acute and convalescent sera (for diagnosis) Serum for diagnosis	#213	
RUBEOLA (MEASLES)	Serology: EIA: IgG	Single serum (for immune status)	#275	Viral & rickettsial serology kit.
	EIA: IgM	Serum for diagnosis		
<u>SALMONELLA</u> (ALL SERO- TYPES)	Isolation	Feces, urine, rectal swabs.	#219	Enteric pathogens kit with buffered glycerol saline preservatives.
		Rectal Swabs	#219	Special kit with Cary- Blair preservative and cold packs. Must be refrigerated. DO NOT FREEZE. Mark slip "Salmonella"
		Food	#504	Refer to the Manual for Environmentalists and Milk Inspectors.
	Identification (referred culture)	Agar slant: heart infusion, trypticase soy, blood or chocolate agar slant.	#219	Mailing Container furnished by submitter.

<u>SHIGELLA</u>	Isolation	Feces, urine, rectal swabs	#219	Enteric pathogens kit with buffered glycerol saline.
		Rectal Swabs	#219	Special kit with Cary-Blair preservative and cold packs. Must be sent refrigerated. DO NOT FREEZE. Mark slip "Shigella".
		Food	#504	Refer to Manual for Environmentalists and Milk Inspectors
	Identification (referred culture)	Agar slant: Heart infusion, trypticase soy, blood or chocolate agar slant.	#219	Mailing container furnished by submitter.
SICKLE CELL	Electrophoresis	Heel puncture blood on filter paper.	#228	Newborn screening form.
SPORO-TRICHOSIS	Serology	5 ml clotted blood or serum	#213	Serology container.
<u>STAPHYLO-COCCUS AUREUS</u>	Isolation	Feces, vomitus	#219	Enteric pathogens kit with buffered glycerol saline. <u>Only by request of the Division of Epidemiology.</u>
		Nasal swabs, skin, skin lesions	#219	Swabs in sterile tubes. <u>Only by request of the Division of Epidemiology.</u>
		Food	#504	Refer to Manual for Environmentalists and Milk Inspectors. <u>Only by request of the Division of Epidemiology for foodborne disease outbreaks.</u>
STREPTO-COCCAL INFECTION	Culture and identification of agent by DFA (Group A only)	Throat swab in silica gel	#275	Hemolytic streptococcus swab kit.

SYPHILIS NOTE: Requests for the FTA-ABS test must be preceded by a screening test.	VDRL Qualitative & Quantitative	Clotted blood, serum, or spinal fluid.	#213	Syphilis serology kit.
	FTA-ABS	Serum	#213	Syphilis serology kit.
TAPEWORM	Macroscopic & microscopic exam, formalin Hemo-D concentrations.	Feces and/or worm. For feces, submit at least three specimens on alternate days.	#219	Intestinal parasites, single vial container (10% formalin); Sterile jar with 10% formalin or 70% ethyl alcohol for the worm.
TORCH TITER		See Intrauterine Infections.		
TOXO-PLASMOSIS	Serology: IFA	Congenital cases: serum from mother and child. Acquired cases: serum.	#275	Viral & Rickettsial Serology Kit
TRICHINOSIS	Microscopic exam	Biopsy of muscle (for food, see "Manual for the Sanitarian")	#219	Intestinal parasites single vial container (10% formalin)
	Bentonite flocculation	5ml whole blood or serum	#213	Serology container
TRIGLYCERIDE		See Lipid Profile		
TUBERCULOSIS	Microscopic exam, culture identification by DNA Probe or HPLC, drug susceptibility studies.	Sputum, gastric wash*, spinal fluid, pleural fluid, pus, urine, other body fluids. *Gastric wash must be neutralized before mailing. Referred culture for identification and drug susceptibility studies.	#207	TB specimen kit Mailing container furnished by submitter.

TULAREMIA	Agglutination test	Acute and convalescent sera.	#213	Serology container.
	Identification (Referred culture)	Chocolate agar slant.	#219	Mailing container furnished by submitter.
TYPHOID	Culture	Feces, urine	#219	Enteric pathogens kit.
	Isolation	Feces, urine, rectal swab	#219	Enteric pathogens basic kit with buffered glycerol saline.
		Rectal swabs		Enteric pathogens special kit with Cary-Blair preservative. Must be refrigerated. DO NOT FREEZE. Mark slip "Salmonella typhi".
<u>SALMONELLA</u> SEROTYPE TYPHI	Antigenic typing	Culture agar or slant without sugar.	#219	Mailing container furnished by submitter.
TYPHUS, Murine (ENDEMIC)	Serology	Acute and convalescent sera	#275	Viral & Rickettsial serology kit.
UNDULANT FEVER		See Brucellosis		
VARICELLA ZOSTER		See Chickenpox		
VDRL		See Syphilis		
<u>VIBRIO</u> <u>CHOLERA</u> AND OTHER <u>VIBRIO</u> SPECIES	Isolation	Feces, urine, rectal swabs	#219	Enteric pathogens special kit with Cary-Blair preservative. Must be refrigerated. DO NOT FREEZE. Mark slip "Vibrio".
	Identification (referred culture)	Agar slant: heart infusion, trypticase soy, chocolate or blood agar slant.	#219	Mailing container furnished by submitter.

NOTE: For bacteriological and chemical water analyses, all samples must be collected and submitted by authorized collectors. All samples from private sources must be received within 48 hours of collection. All samples from public drinking water systems must be received within 30 hours of collection. If additional tests are needed, contact the Division of Laboratory Services.

WATER: BACTERIO- LOGICAL ANALYSES	Fecal coliform count & total coliform count.	Recreational water.	#507	Refer to the Manual for Environmentalists & Milk Inspectors for all tests.
	Heterotrophic plate count	Recreational water.	#507	
	Pseudomonas	Water from spas.	#507	
	Total coliform count and <u>E. coli</u> count.	Drinking water.		
	Presence or absence of total coliforms & E. coli.	Water from dairies.	#507	
WATER: CHEMICAL ANALYSES	Alkalinity Calcium Chloride Color Fluoride Hardness Iron Magnesium Manganese Nitrates Odor PH Solids Sulfate Turbidity	Drinking water from private supplies.	#700b	Chemical analysis cubitainer.
	Dental Fluoride		#505c	Call CHS-DPH Maternal and Child Health.
	Metals		#504	Metal Cubitainer
	Pesticides		#504	Call the lab.
	Petroleum Products		#504	Call the lab.
WHOOPING COUGH		See Bordetella		

<u>YERSINIA</u> <u>PESTIS</u> (PLAGUE)	NOTE: Call the Division of Epidemiology or the Division of Laboratory Services for specific instructions before collecting any specimens.			
<u>YERSINIA</u> <u>SPECIES</u> <u>OTHER THAN</u> <u>YERSINIA</u> <u>PESTIS</u>	Isolation	Feces, urine, rectal swabs Rectal swabs	#219	Enteric pathogen kit with buffered glycerol saline. By request only. Mark slip "Yersinia". Enteric pathogen special kit with Cary-Blair preservative. Must be sent refrigerated. DO NOT FREEZE. Mark slip "Yersinia".
	Identification	Agar slant: heart infusion, trypticase soy, blood or chocolate agar slant.	#219	Mailing container furnished by submitter.

If you need any tests which are not listed in the above reference, please contact our Laboratories at 502/564-4446.

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